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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/471,964	12/23/1999	CYNTHIA L. BICKERSTAFF	10559/096001	8158

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FISH & RICHARDSON, PC	BOUTAH, ALINA A	
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DATE MAILED: 07/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _11 May 2005_ .

2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-5,11-15,21-25 and 31-61_ is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-5,11-15,21-25 and 31-61_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

   If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All b)☐ Some * c)☐ None of:

   1. ☐ Certified copies of the priority documents have been received.

   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

   3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
   application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

   a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)   4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)   5) ☐ Notice of Informal Patent Application (PTO-152)

3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .   6) ☐ Other: .

U.S. Patent and Trademark Office

PTO-326 (Rev. 04-01)   Office Action Summary   Part of Paper No. 7/11

DETAILED ACTION

Response to Amendment

This action is in response to Amendment received May 11, 2005. Claims 1-5, 11-15, 21-

25, 31-61 are pending in the present application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-5, 11-15, 21-25, 31-38, 40-44, 46-49, 51, 54, 55, 58 and 59 are rejected under

35 U.S.C. 103(a) as being unpatentable over Haggard et al. in view of USPN 6,317,787 issued to

Boyd et al. in further view of USPN 5,913,041 issued to Ramanathan et al.

(Amended) Regarding claims 1, 11, and 21, Haggard et al. teach a method (claim 1), a

system (claim 11), and a computer program (claim 21) for real-time measurement of the

performance of communications on a large area network between a selected server and a

plurality of users, based upon actual user experience, including:

accessing a server log having records of actual user access to the selected server

(Abstract);

aggregating records from the server log into a database (col. 7, lines 22-44);

performing at least one statistical analysis of each time bin on each aggregate slot (col. 7, lines 22-44); and

outputting the results of such statistical analysis as an indication of actual server usage by users (Abstract; col. 2, lines 51-67 – col. 3, lines 1-6; col. 7, lines 23-44; figure 5).

However, Haggard et al. fail to explicitly teach: accessing a server log having records indicative of routings through the network of actual user access to the selected server; aggregating records from the server log into a plurality of aggregate slots, each slot having at least one time bin which represents an interval of time, based on an aggregation method; and performing at least one statistical analysis separately of each time bin on each aggregate slot.

Ramanathan teaches accessing a server log having records indicative of routings through the network of actual user access to the selected server (abstract; col. 3, lines 14-25).

Boyd et al. teach: aggregating records from the server log into a plurality of aggregate slots, each slot having at least one time bin which represents an interval of time, based on an aggregation method (figure 5; col. 1, lines 27-35; col. 2, lines 5-11; col. 3, lines 47-59; col. 8, lines 37-42); and performing at least one statistical analysis separately of each time bin on each aggregate slot (col. 3, lines 47-59; col. 4, lines 10-25).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to access a server log having records indicative of routings through the network of actual user access in order to calculate and monitor throughput (Ramanathan col. 3, lines 43-45), and aggregate records into a plurality of aggregate slots having time bin and analyzing the slots separately in order to identify trends, statistics and other information regarding traffic data (Boyd, col. 4, lines 18-20), therefore, facilitating in analyzing user's experience on the network.

Regarding claims 2, 12, and 22, Haggard et al. fail to teach the method of claim 1, the

system of claim 11, and the computer program of claim 21, further including filtering out

selected records from the server log before the step of aggregating. Boyd et al. teach filtering out

selected records from the server log (figures 6 and 7, no. 64). At the time the invention was

made, it would have been obvious to one of ordinary skill in the art to filter out selected records

from the server before the step of aggregating in order to remove unwanted records that will not

be analyzed, thus improving the speed in making performance analysis.

Regarding claims 3, 13, and 23, Haggard et al. teach the method of claim 1, the system of

claim 11, and the computer program of claim 21, further including generating an event

notification if a selected statistical analysis value is abnormal (figures 6A-B; col. 7, lines 61-67 –

col. 8, lines 1-16).

Regarding claims 4, 14, and 24, Haggard et al. teach the method of claim 1, the system of

claim 11, and the computer program of claim 21, further including selecting the aggregation

method from a set of aggregation methods (col. 7, lines 23-44).

Regarding claims 5, 15, and 25, Haggard et al. teach the method of claim 1, the system of

claim 11, and the computer program of claim 21, wherein the aggregation method includes

aggregation by log-file record column data value for each record from the server log (col. 6, lines

61-67 – col. 7, lines 1-15).

Regarding claim 31, Haggard fails to teach a method as in claim 1, wherein said statistical analysis determines time for specified user access relative to a specified interval, and sorts said user access according to a number of times that the application exceeds said interval. Boyd teaches said statistical analysis determining time for specified user access relative to a specified interval, and sorts said user access according to a number of times that the application exceeds said interval (col. 2, lines 12-29; col. 6, lines 56-54). At the time the invention was made, one of ordinary skill in the art would have been motivated to combine the teaching of Boyd with the teaching of Haggard by enabling the statistical analysis to determine time for specified user access and sort said user access according to a number of times that the application exceeds said interval in order to identify trends, statistics and other information regarding traffic data (col. 4, lines 18-20), therefore, facilitating in analyzing user's experience on the network.

Regarding claims 32, 40, and 46 Haggard fails to teach a method as in claim 1, wherein said server log includes a time stamp indicating when a record was formed, a client IP address, a time taken to complete transmission, and a size of the transmission. Boyd teaches said server log including a time stamp indicating when a record was formed, a client IP address, a time taken to complete transmission, and a size of the transmission (figure 3A). At the time the invention was made, one of ordinary skill in the art would have been motivated to enable said server log to include a time stamp indicating when a record was formed, a client IP address, a time taken to complete transmission, and a size of the transmission in order to identify trends, statistics and other information regarding traffic data (col. 4, lines 18-20), therefore, facilitating in analyzing user's experience on the network.

Regarding claims 33 and 41, Haggard fails to teach a method as in claim 32, wherein said server log is formed by adding new data entry to the server log, and said server log is closed to further data entry prior to said performing. Boyd teaches said server log being formed by adding new data entry to the server log, and said server log is closed to further data entry prior to said performing (figures 5-7). At the time the invention was made, one of ordinary skill in the art would have been motivated to for said server log by adding new data entry to the server log in order to collect new information so that it can be analyzed, and closing the server log prior to said performing in order prevent new information which could potentially effect statistical analysis of the traffic data.

Regarding claims 34, 42 and 47, Haggard fail to expressly teach a method as in claim 32, wherein said aggregating comprises determining a geographic location from the IP address, and aggregating IP addresses having a specified relationship with a specified geographical location. Boyd teaches said aggregating comprises determining a geographic location from the IP address, and aggregating IP addresses having a specified relationship with a specified geographical location (col. 3, lines 48-59; col. 4, lines 26-45; col. 5, lines 66-67 – col. 6, lines 1-10). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to determine a geographic location from the IP address, and aggregating IP addresses having a specified relationship with a specified geographical location in order to analyze and produce statistical reports and summaries by way of user activity (col. 4, lines 64-67 – col. 5, lines 1-5).

Regarding claim 35, Haggard fails to teach a method as in claim 32, further comprising

aggregating said time bins into chronological order and determining trends among said time bins.

Boyd teaches aggregating said time bins into chronological order and determining trends among

send time bins (Abstract; col. 6, lines 42-55). At the time the invention was made, one of

ordinary skill in the art would have been motivated to aggregate said time bins into chronological

order in order to facilitate the analyzer in producing statistics and other information regarding

traffic data (col. 4, lines 18-20), therefore, facilitating in analyzing user's experience on the

network.

Regarding claim 36, Haggard fail to teach a method as in claim 32, further comprising

using said information to compute byte density, transfer rate, and error fraction. Boyd teaches

using said information to compute byte density, transfer rate, and error fraction (table 1, col. 5,

lines 30-44). At the time the invention was made, one of ordinary skill in the art would have been

motivated to compute byte density, transfer rate, and error fraction in order to identify trends,

statistics and other information regarding traffic data (col. 4, lines 18-20), therefore, facilitating

in analyzing user's experience on the network.

Regarding claims 37, 43 and 48, Haggard fails to teach a method as in claim 32, wherein

said statistical analysis is an assessment of performance related measurement against a

geographical location of a client. Boyd teaches said statistical analysis being an assessment of

performance related measurement against a geographical location of a client (col. 3, lines 48-59;

col. 4, lines 26-45; col. 5, lines 66-67 – col. 6, lines 1-10). At the time the invention was made,

one of ordinary skill in the art would have been motivated to enable said statistical analysis being an assessment of performance related measurement against a geographical location of a client in order to facilitate in analyzing and producing statistical reports and summaries by way of user activity.

Regarding claims 38, 44 and 49, Haggard fails to teach a method as in claim 32, wherein said statistical analysis is an assessment of a route traversed during use of the network application by an end user. Boyd teaches said statistical analysis being an assessment of a route traversed during use of the network application by an end user (col. 3, lines 48-59; col. 4, lines 26-45; col. 5, lines 66-67 – col. 6, lines 1-10). At the time the invention was made, one of ordinary skill in the art would have been motivated to enable said statistical analysis as being an assessment of a route traversed during use of the network application in order to facilitate in analyzing and producing statistical reports and summaries by way of user activity.

Regarding claims 51, 55, and 59, Haggard et al. fail to teach the method of claim 34, the system of claim 11, and the computer program of claim 21, the method of claim 6, the system of claim 16, and the computer program of claim 26, wherein determining geographical or source information for each record includes:

defining a database comprising large area network address blocks having geographical or source information;

comparing an address field in each record to the address blocks in the database; and

associating with each record the geographical or source information from an address

block matching the address field of the record.

Boyd et al. teach: defining a database comprising large area network address blocks

having geographical or source information (col. 4, lines 40-45).

Although Boyd et al. do not expressly teach comparing an address field in each record to

the address blocks in the database; and associating with each record the geographical or source

information from an address block matching the address field of the record, Boyd et al. teach a

method of using analysis results collected into a log file or database for building geographic and

other summaries (col. Lines 40-45). In order to determine geographical or source information, it

is obvious that an address (e.g. IP address) can be somehow compared to a pre-defined address in

a database that contains geographical or source information, once found, the addresses can be

associated together, thus providing a geographic information.

At the time the invention was made, it would have been obvious to one of ordinary skill

in the art to combine the teaching of Boyd and Haggard in order to determine geographical or

source information in order to analyze and produce statistical reports and summaries by way of

user activity (col. 4, lines 64-67 – col. 5, lines 1-5).

Regarding claims 54 and 58, Haggard et al. teach the system of claim 11, and the

computer program of claim 21, further including: selecting an aggregation method to aggregate

records (col. 7, lines 23-44). However, Haggard et al. fail to teach:

determining geographical or source information for each record; and

selecting the aggregation method to aggregate records based on such geographical or source information.

Boyd et al. teach determining geographical or source information for each record (col. 3, lines 48-59; col. 4, lines 26-45; col. 5, lines 66-67 – col. 6, lines 1-10). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to select the aggregation method to aggregate records based on source information in order to analyze and produce statistical reports and summaries by way of user activity (col. 4, lines 64-67 – col. 5, lines 1-5).

Claims 39, 45, 50, 53, 57 and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haggard et al. in view of Boyd, in view of Ramanathan, in further view of USPN 4,967,345 issued to Clarke et al.

Regarding claims 39, 45 and 50, Haggard fails to teach a method as in claim 1, further comprising determining a new path based on said results of said statistical analysis. Clarke teaches determining a best route through a network from one node to another (Abstract; col. 2, lines 4-11). At the time the invention was made, one of ordinary skill in the art would have been motivated to combine the teaching of Haggard, Boyd, and Clerk) in order to allow the administrator to monitor and regulate network traffic, thus improving the network communications performance.

Regarding claims 53, 57, and 61, Haggard et al. teach the method of claim 1, the system of claim 11, and the computer program of claim 21, including a statistical analysis of records

from a server log and responding to performance data that surpasses an associated threshold

(Abstract).

However, Haggard et al. fail to further teach:

determining exit routing paths from each selected server based on the records from the

server log;

determining a best performing exit route based on the statistical analysis of records from

the server log;

biasing incoming and outgoing communications with respect to each server to use the

determined best performing exit route.

Clarke et al. teach determining a best route through a network from one node to another

(Abstract; col. 2, lines 4-11). At the time the invention was made, it would have been obvious to

one of ordinary skill in the art to combine the teaching of Clark et al. (best route) and the

teaching of Haggard et al. (records from server log) in order to allow the administrator to

monitor and regulate network traffic, thus improving the network communications performance.

Claims 52, 56, and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Haggard et al. in view of Boyd, in view of Ramanathan, in further view of USPN 5,946,679

issued to Ahuja et al.

Regarding claims 52, 56 and 60, Haggard et al. fail to teach the method of claim 7, the

system of claim 17, and the computer program of claim 27, wherein comparing an address field

in each record to the address blocks in the database includes:

defining an array of binary trees for the address blocks in the database, each address block within a binary tree within an array element being masked by a corresponding unique subnet mask value;

masking each address field in each record by a unique subnet value corresponding to a selected array element;

comparing each masked address field to an address field of the address blocks within the binary tree of the selected array element;

outputting selected fields of any matching address block; and

otherwise, continuing the step of comparing with a next selected array element until a match if found or all array elements have been compared.

Ahuja et al. teach:

defining an array of binary trees for the address blocks in the database, each address block within a binary tree within an array element being masked by a corresponding unique subnet mask value (col. 3, lines 10-16);

although Ahuja et al. do not explicitly teach (k) masking each address field in each record by a unique subnet value corresponding to a selected array element, it is well known in the art that all network addresses such as IP address has a subnet mask associated with it;

comparing each masked address field to an address field of the address blocks within the binary tree of the selected array element (col. 3, lines 15-20);

outputting selected fields of any matching address block (col. 3, lines 17-20); and

otherwise, continuing the step of comparing with a next selected array element until a match if found or all array elements have been compared (col. 3, lines 17-20).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to combine the teachings of Haggard, Boyd and Ahuja in order to facilitate geographical information determination, thus facilitating user's usage statistical analysis.

Response to Arguments

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alina N. Boutah whose telephone number is 571-272-3908. The examiner can normally be reached on Monday-Friday (9:00 am - 5:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on 571-272-3923. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ANB

WILLIAM C. VAUGHN, JR.
PRIMARY EXAMINER